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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/072,165

02/07/2002

Terry C. Coughlin JR.

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12/14/2004

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EXAMINER

CHANG, DANIEL D

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/072,165		COUGHLIN ET AL.	
	Examiner		Art Unit	
	Daniel D. Chang		2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-8 and 10-18 is/are allowed.
- 6) ☒ Claim(s) 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/26/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Acknowledgement

Receipt is acknowledged of the Amendment filed November 26, 2004.

Claim Objections

Claims 19 and 20 are objected to because of the following typographical errors:

Claim 19, second line from the last, "o" appears to be --of--.

Claim 20, line 4, after "and", --a digital controller,-- should be entered in order for "the digital controller" on line 5 to have proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lamphier et al. (US 5,666,078).

Regarding claim 19, Lamphier et al. discloses, in Figs 1 and 2, a method of controlling the impedance of a driver of an input/output cell (60, 82, 80) of an integrated circuit, comprising the steps of:

providing a reference cell (20) including a node (32) having a variable voltage;

providing a digital controller (72, 74, 76, 78);

Art Unit: 2819

using the digital controller to generate a first variable signal (A0-A3) and to apply the first variable signal to the reference cell (20) to change the voltage of the node;

comparing (30) the voltage of the node to a reference voltage (31);

using the digital controller (40) to generate a second variable signal (L0-L3) based on said comparison, including the step of adjusting (72) said second signal until a stable value is reached for said second signal;

applying the second signal to the input/output cell (60) to adjust the impedance of the driver of the input/output cell to adjust the impedance of the driver of the input/output cell;

holding the second signal (82) at the input/output cell; and

when a predefined event occurs (K_Clock), applying the second signal (80) to the driver of the input/output cell to adjust the impedance of said driver.

Regarding claim 20, Lamphier et al. discloses, in Figs 1 and 2, an application specific integrated circuit comprising:

an input/output cell (60, 82, 80) having a varying input/output impedance (64, Z, 2Z, 4Z, 8Z);

a reference cell (20) including a node (32) having a variable voltage;

a comparator (30) for comparing the voltage of the node (32) to a reference voltage (31);

and

a digital controller (72, 74, 76, 78), wherein the digital controller includes

i) means to generate a second variable signal (A0-A3) based on said comparison, including means for adjusting (72) said second signal until a stable value is reached for said second signal; and

Art Unit: 2819

ii) means to apply (78) the second signal (A0-A3) to the input/output cell (via 76, 78, 82) to adjust the impedance of the driver of the input/output cell; and wherein the input/output cell includes

i) a plurality of latches (82) to hold the second signal, and

ii) means to release (80) the second signal from said latches and to apply the second signal to the driver of the input/output cell to adjust the impedance of said driver in response to a predefined event occurring.

Allowable Subject Matter

Claims 2-8 and 10-18 are allowed.

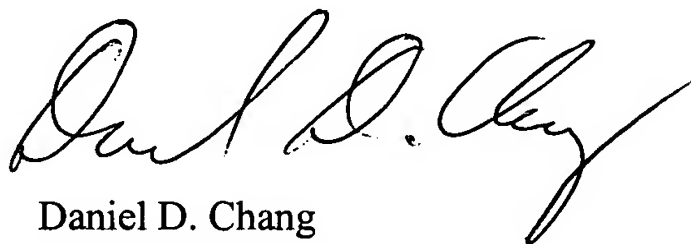
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D. Chang whose telephone number is (571) 272-1801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2819

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel D. Chang
Primary Examiner
Art Unit 2819

dc

DANIEL CHANG
PRIMARY EXAMINER